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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,990	03/19/2001	Gavin Peacock	PALM-3603	9598

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[REDACTED] EXAMINER

CAO, DIEM K

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 03/19/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,990

Applicant(s)

PEACOCK ET AL.

Examiner

Diem K Cao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 January 2004.
2a) This action is FINAL. 2b) This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-21 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION

1. This Office action is in response to the Amendment filed on 1/2/2004.
2. Claims 1-21 remain in the application. Applicant has amended claims 1-3, 5-6, 8-13, and 15-20.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flanagin (U.S. 6,560,660 B1) in view of Patterson (US 2003/0154233 A1).

5. **As to claim 1**, Flanagin teaches a method for allowing multiple applications to cooperatively access the same hardware resource (The features described above allow different application programs to use a single serial port; col. 5, lines 46-49), the method comprising registering a callback instruction for a first application that is using the hardware resource (the application program ... callback functions ... status changes and received data; col. 3, lines 48-60), invoking the callback instruction to notify the first application of status changes (which are then invoked by the operating system to report events such as status changes and received data; col. 3, lines 48-60), and yielding the hardware resource to the second application provided the

first application grants the request (instructs application program 53 to relinquish control of the serial port; col. 4, lines 26-39 and prompting the user with an offer to relinquish exclusive control of the serial port; col. 5, lines 12-45).

6. However, Flanagin does not teach invoking the callback instruction to notify the first application of a request from a second application for the same hardware resource. Flanagin teaches invoking the callback instruction to notify the first application of a new device is connected to the serial port, and whether the device is compatible with the application in control of the port or different application (col. 5, lines 12-45). Patterson teaches a dispatcher query the application that in use of the device when another application requests for use of the same device (an application requests ... to the requesting application; page 5, section 0070 and the dispatcher may ... time it requires use of the device; page 5, sections 0074-0075).

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine and improve the teaching of Flanagin and Patterson because it improves the system of Flanagin by eliminating inefficiencies due to the processes frequently repeating requests to the resource.

8. **As to claim 3,** Flanagin teaches registering the first application as a passive application (application program 53 runs continuously in a background mode; col. 4, lines 1-12), wherein a passive application defined the callback instruction (the use of callback functions – functions of the application program that are registered with the operating system; col. 3, lines 51-60).

9. **As to claim 4,** Flanagin does not teach invoking the callback instruction step is performed responsive to the request from the second application. Flanagin teaches invoking the call back function is performed responsive to detecting a new device is connected to the serial port, and whether the device is compatible with the application in control of the port or different application (col. 5, lines 12-45). Patterson teaches a dispatcher query the application that in use of the device when another application requests for use of the same device (an application requests ... to the requesting application; page 5, section 0070 and the dispatcher may ... time it requires use of the device; page 5, sections 0074-0075). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine and improve the teaching of Flanagin and Patterson because it improves the performance of the system of Flanagin by automatically share the serial port instead of user intervention.

10. **As to claim 5,** Flanagin teaches providing notice to the first application that the second application is finished using the hardware resource, the notice indicating the hardware resource is available (the user can instruct application program 53 to regain control of the serial port ... the other program has relinquished it; col. 5, lines 41-45).

11. **As to claim 6,** Flanagin teaches closing the hardware resource for the first application, and conducting procedures for shutting down the fist application (instructs the application ... terminate application program 53; col. 4, lines 29-39).

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12. **As to claim 7**, Flanagin does not teach a response granting the request is a Boolean true, and wherein a response denying the request is a Boolean false. Flanagin teaches the application granting the request by offer options to the users for selection (col. 5, lines 11-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve the system of Flanagin by implementing response in Boolean values because it is just a design choice.

13. **As to claim 8**, Flanagin teaches a method for allowing multiple applications to cooperatively access a same serial port (The features described above allow different application programs to use a single serial port; col. 5, lines 46-49), the method comprising opening the serial port for a first application (the application program makes calls to application program interfaces of the OS to obtain exclusive use of the serial port; col. 3, lines 51-53), wherein the opening comprises registering a callback instruction for the first application (the use of callback functions; col. 3, lines 51-60), detecting a peripheral device connecting to the same serial port (a peripheral device is connected or disconnect from the port 39; col. 4, lines 50-55), invoking the callback instruction responsive to the detection (the callback function will be invoked upon ... is connected from port 38; col. 4, lines 50-55), wherein the invoking comprises sending notice to the first application of the request (step 106 is initiated upon detecting the connection of a peripheral device ... further communication with device; col. 5, lines 11-39), receiving from the first application a response to the notice (prompting the user with an offer to relinquish exclusive control of the port; col. 5, lines 11-39 and application program 53 offers ... with newly connected device; col. 4, lines 1-12), and yielding the same serial port to the second application

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provided the response from the first application grants the request (instructs application program 53 to relinquish control of the serial port; col. 4, lines 26-39 and prompting the user with an offer to relinquish exclusive control of the serial port; col. 5, lines 12-45).

14. However, Flanagin does not teach receiving a request for the same serial port from a second application. Patterson teaches receiving a request for the same serial port from a second application (an application requests ... to the requesting application; page 5, section 0070 and the dispatcher may ... time it requires use of the device; page 5, sections 0074-0075).

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine and improve the teaching of Flanagin and Patterson because it improves the system of Flanagin by eliminating inefficiencies due to the processes frequently repeating requests to the resource.

16. **As to claim 9**, Flanagin teaches registering the first application as passive application (application program 53 runs continuously in a background mode; col. 4, lines 1-12 and the use of callback functions – functions of the application program that are registered with the operating system; col. 3, lines 51-60).

17. **As to claim 10**, Flanagin does not teach receiving from the first application a response denying the request. Patterson teaches a deny response is sent to the second application when the first application is in use of the device (an application requests ... to the requesting application;

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page 5, section 0070), a query is sent to the first application to determine the time the device will be needed (a query is made to an application; page 5, sections 0074-0075), and there may be response or no response from the first application (the application does not provide any indication of the possible remaining time; page 5, section 0075). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine and improve the teaching of Flanagin and Patterson because it provides a method to let other applications know if the port is still in used.

18. **As to claim 11**, Flanagin does not teach returning an error message to the second application when the serial port is not yielded to the second application. Patterson teaches returning a message to the second application when the serial port is not yield to the second application (an application request ... back to the requesting application; page 5, section 0070).

19. **As to claims 12-14**, see rejections of claims 5-7 above.

20. **As to claim 15**, see rejection of claim 8 above. Flanagin further teaches (col. 2, line 63 – col. 3, line 34) a serial port (a serial port 38), a processor (a processor 32), a memory (memory 30). Although Flanagin does not teach a bus, Flanagin teaches a computer or portable computer, inherently, bus is existed in the computer system.

21. **As to claims 16-21**, see rejections of claims 9-14 above.

22. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flanagin (U.S. 6,560,660 B1) in view of Patterson (US 2003/0154233 A1) further in view of APA (Admitted Prior Art).

23. **As to claim 2**, Flanagin does not teach the hardware resource comprises interface circuitry coupled to multiple ports. APA teaches the hardware resource comprises interface circuitry coupled to multiple ports (UART ... both the serial port and infrared port; page 2, lines 10-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Flanagin and APA because it provides method to share not only the serial port but also other hardware device such as UART.

Response to Arguments

24. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diem K Cao whose telephone number is (703) 305-5220. The examiner can normally be reached on Monday - Thursday, 9:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

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Diem Cao


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